

REMARKS

Claims 1, 4, 10, 13, and 16 stand rejected under 35 U.S.C. 102(e) as being anticipated by Chaudhuri et al. (U.S. Patent No. 6,223,171, hereinafter “Chaudhuri ‘171”). In response, Applicants amended independent claims 1, 10, 13, and 16 to recite that immediately after the issued SQL sentence is parsed, a cost comparison is made to determine whether an index should be dynamically generated, and respectfully traverse the rejection as it applies to the amended claims.

Chaudhuri ‘171 is directed to a what-if index analysis utility for database systems. More specifically, Chaudhuri ‘171 discloses that a database administrator may specify a workload for a session, and that the workload may be a log of previously executed queries. Next, the database administrator will ask for a breakdown of the queries by type to try to understand the workload mix. Chaudhuri ‘171 further discloses that the database administrator may focus only on the most expensive queries. (*See* Col. 23, lns. 19–36). In Chaudhuri ‘171, the database administrator must do a cost benefit analysis after a log of queries has been executed and data has been returned. Chaudhuri ‘171 fails to disclose or suggest making an automatic and immediate cost comparison after parsing the issued SQL sentence. That is, before a query is executed and data is returned.

In contrast, Applicants amended the claims to recite, *inter alia*, that a cost comparison immediately occurs after parsing an issued SQL sentence. Support for these amendments can be found on page 13, lines 11–16, of Applicants’ specification. In the

present invention, once a SQL sentence is received, it is parsed. Then, a cost comparison is immediately made to determine whether an index should be dynamically generated. That is, the present invention makes the cost comparison in real-time. Thus, a comparison is made automatically, which improves processing efficiency in comparison to conventional database management systems, such as the Chaudhuri '171 database system. Furthermore, since the index is dynamically generated upon completion of the real-time comparison, the index can be used to retrieve data from the database sooner than conventional systems, such as Chaudhuri '171, which does not disclose these features.

In addition to the above, the present invention advantageously compares costs immediately when retrieval is not repeated. Comparing costs immediately, that is, in real time, is effective in the case of unrepeated retrieval. More specifically, when an arbitrary SQL sentence is issued in the present invention, costs can be compared in real time and the issued SQL sentence can be retrieved by an optimal method according to the result of the cost comparison. Therefore, even during a one-time retrieval, an optimal retrieval can be executed.

Chaudhuri '171 can not achieve this feature. That is, the method of Chaudhuri '171 is not helpful during a first-time retrieval. Chaudhuri '171 teaches that an optimal retrieval may be executed during a second time or thereafter. Therefore, in the situation of an unrepeated retrieval, where a one-time retrieval is executed, the method of Chaudhuri '171 is unable to retrieve using an optimal method, as in the present invention.

Furthermore, in Chaudhuri '171 (see et seq.), a manager (human operator) determines/operates to instruct index generation. Therefore, Chaudhuri '171 distinctly differs from the present invention, which has an index that is dynamically generated.

Since Chaudhuri '171 merely discloses that a database administrator makes a cost comparison after the queries have been executed and data has been returned, and not immediately after a parsing of the SQL sentence, as now recited in the amended claims, withdrawal of the §102 rejection of claims 1, 4, 10, 13, and 16 is respectfully requested.

Claims 3, 8, 12, and 15 stand rejected under 35 U.S.C. 103(a) being unpatentable over Chaudhuri '171, and further in view of Chaudhuri et al. (U.S. Patent No. 6,169,983 B1), (hereinafter "Chaudhuri '983"). Applicants traverse the rejection for the reasons recited above with respect to §102 rejection of claims 1, 4, 10, 13, and 16.

Independent claims 3, 12, and 15 are amended to recite that a cost comparison is made immediately after the SQL sentence is parsed. Chaudhuri '983 is directed to an already existing index, and is cited by the Examiner for teaching a merging of indexes. Chaudhuri '983 fails to disclose or suggest making a comparison immediately after parsing. Thus, neither Chaudhuri '171 nor Chaudhuri '983 alone or in combination disclose or suggest this feature. For this reason, Applicants respectfully request withdrawal of the §103 rejection of claims 3, 8, 12, and 15.

Claims 2, 5-7, 11 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri '171, and further in view of Smith et al. (U.S. Patent No.

5,404,510 A). Applicants traverse the rejection for the reasons recited above with respect to the §102 rejection of claims 1, 4, 10, 13, and 16.

Smith is recited by the Examiner for teaching a first index which satisfies a condition wider than a retrieved condition existing among already generated indexes. Smith is silent regarding making a comparison immediately after parsing, as now recited in amended claims 2, 11, and 14. For these reasons, withdrawal of the §103 rejection is respectfully requested.

Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri '171 and Chaudhuri '983, and further in view of Smith. Applicants traverse the rejection for the reasons recited above with respect to §103 rejection of independent claim 3.

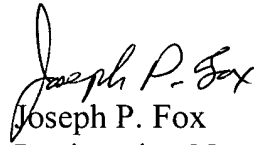
Since claim 9 depends upon claim 3, it necessarily includes all of the features of its associated independent claim plus other additional features. Thus, Applicants submit that the §103 rejection of claim 9 has also been overcome for the same reasons mentioned above to overcome rejection of independent claim 3. Accordingly, Applicants respectfully request that §103 rejection of claim 9 also be withdrawn.

For the foregoing reasons, Applicants believe that this case is in condition for allowance, which is respectfully requested. The Examiner should call Applicants' attorney if an interview would expedite prosecution.

Respectfully submitted,

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